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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

MAILED

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Technology Center 2100

Application Number: 09/839,179
Filing Date: April 19, 2001
Appellant(s): BARKER ET AL.

William N. Hogg
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 5, 2005 appealing from the Office action mailed July 12, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-20.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 4-8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent 5,805,597 to Edem.

As to claim 1, Edem discloses a method of conserving power consumption in a communication system which includes components capable of selectively entering a low power operating mode [col. 8, lines 45-67 and col. 9, lines 1-6] and an auto-negotiation feature by:

[a] determining eligibility of a system to enter a low power operating mode based on operator generated signals, time of day, or non-use of the system for a period of time, or a combination thereof – specifically, non-use of the system for a period of time [col. 8, lines 44-67, and col. 9, lines 1-6];

[b] exchanging messages indicative of a low power operating mode capability [col. 13, lines 18-22];

[c] using an auto-negotiation feature to interpret exchanged signals to verify that connected systems include the low power mode capability [col. 13, lines 21-23]; and

[d] transmitting a signal that a communications session is completed to cause connected systems to enter the low power mode [col. 13, lines 23-25].

Edem teaches a transmitting device on the network uses an auto-negotiation protocol to indicate that it desires to enter a low power mode, and receives a message from the receiving device that it is also capable of entering the low power mode. If the exchange indicates that both devices support a low power mode, the devices will enter a low power mode, substantially as claimed. Furthermore, Edem teaches that the devices in the system would be eligible to enter a low power mode when there was little or no communication traffic, and subsequently negotiate to enter said low power mode [col. 8, line 67, and col. 9, lines 1-6].

As to claim 2, Edem discloses the auto-negotiation feature is a next-page facility [col. 12, lines 37-55].

As to claim 4, Edem discloses a system utilizing a data communication device having a plurality of data exchange modes, each of said modes operating at different speeds and power consumption levels, protocol means for compatibly coupling said data communication device to another data communication device for exchanging data therebetween, and selection means in said data communication device operating in a high speed mode to switch to a different speed mode that consumes less power during an idle period by:

[a] exchanging data representative of said data communication devices ability [col. 13, lines 18-23] and eligibility [col. 8, line 67, and col. 9, lines 1-6] to operate at the least power consuming speed;

[b] decoding via said protocol means said representative data [col. 13, lines 11-25]; and

[c] changing to said least power consuming speed in response to another protocol signal [col. 13, lines 23-25].

Edem teaches the method to conserve power, including using auto-negotiation to verify the ability to enter a low power mode, and having the devices enter a low power mode thereafter, substantially as claimed. Furthermore, Edem teaches that the full power mode has a greater bandwidth than the low power mode [col. 19, lines 51-55]. Therefore, Edem teaches that the higher transmission speed consumes more power, substantially as claimed.

As to claim 5, Edem discloses a method for conserving power consumption during periods of low usage by using a next-page aspect of the auto-negotiation feature to communicate among terminal data equipment each equipment's capability to assume a low power mode, the method comprising:

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[a] detecting periods of low network usage [col. 8, lines 44-67, and col. 9, lines 1-6];

[b] verifying in response to detection of low network usage that each equipment is eligible to assume the low power mode by use of the auto-negotiation feature [col. 13, lines 11-25]; and

[c] asserting signals to put each eligible equipment in a low power mode of operation [col. 13, lines 23-25].

Edem teaches the method to conserve power, including using auto-negotiation to verify the ability to enter a low power mode, and having the devices enter a low power mode thereafter, substantially as claimed. Furthermore, Edem teaches that such an attempt to enter a low power mode occurs when network traffic has decreased to a limited level [FIG. 13, element 211].

As to claims 6-8, Edem discloses the means to put the system in low power mode selectively detect [col. 11, lines 40-47] and control [col. 10, lines 19-43, and col. 11, lines 19-39] portions of a physical layer device in said system. Edem teaches that the power mode is selected by detecting the protocol negotiation via the physical layer, and that the power mode controls whether the full-power or low-power portions are used to transmit and receive data.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,805,597 to Edem, in view of U.S. Patent 6,360,327 to Hobson.

As to claims 9-20, Edem teaches the limitations of the claim, including a method of conserving power by using an auto-negotiation feature to determine the capability and eligibility of components to enter a low power mode, but does not teach that the eligibility to enter the low power mode is stored in the system.

Hobson teaches that components may be selectively placed into a low power mode [col. 11, lines 59-63, and col. 12, lines 35-47]. Thus, Hobson teaches a means for conserving power similar to that of Edem, including determining if components are eligible to enter a low power mode [col. 2, lines 66-67, and col. 3, lines 1-12]. Hobson further teaches the eligibility of the system to enter the low power mode is stored in a sleep register when a sleep request occurs [col. 10, lines 41-64], by using at least one binary bits [col. 9, lines 18-30]. Furthermore, Hobson teaches that the sleep register is organizationally unique [col. 10, lines 61-64].

At the time that the invention was made, it would have been obvious to a person of ordinary skill in the art to employ the storage of power mode eligibility as taught by Hobson. One of ordinary skill in the art would have been motivated to do so that the components can determine if the system is eligible to enter a low power mode.

It would have been obvious to one of ordinary skill in the art to combine the teachings of the cited references because they are both directed to the problem of conserving power consumption. Moreover, the storage of power mode eligibility means taught by Hobson would

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improve the flexibility of Edem because it allows for the indication of a plurality of low power modes [col. 2, lines 53-65].

(10) Response to Argument

Applicant's arguments filed December 5, 2005 have been fully considered but they are not persuasive.

In the remarks, applicants argued in substance that Edem does not teach or suggest that the system is "capable of determining eligibility of the system to enter a low power mode based on operator generated signals, time of day, or non-use of the system for a period of time, or a combination thereof". But Edem teaches that the system determines if it is to enter a low power mode based on a non-use of the system for a period of time [col. 8, lines 44-67], such as when there is no or only a very limited amount of data being exchanged [col. 8, lines 48-52]. Furthermore, Edem teaches that when this condition is met, the system is eligible to enter a low power mode [col. 8, lines 62-67]. Thus, Edem specifically teaches the eligibility criteria for entering a low power is based on a non-use of the system for a period of time, substantially as claimed.

In the remarks, applicants argued in substance that Edem does not teach or suggest a protocol or exchange of signals for determining eligibility. But Edem teaches exchanging data representative of said data communication devices ability [col. 13, lines 18-23] and eligibility [col. 8, line 67, and col. 9, lines 1-6] to operate at the least power consuming speed.

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Furthermore, Edem teaches a protocol comprising an exchange of signals for determining the mutual eligibility of the endpoints to enter a low power mode, and causing said endpoints to enter said low power mode if they are both capable of such communication [col. 13, lines 11-25]. Thus, Edem specifically teaches a protocol or exchange of signals for determining eligibility, substantially as claimed.

In the remarks, applicants argued in substance that Edem does not teach or suggest the function of determining capability of both the transmitting and receiving ends to enter a low power mode, and then if, and only if, both ends are capable of enteing a low power mode, then determining if both ends are eligible to enter a low power mode. But this is not true. The method as claimed is not limited to a specific order. However, even if such an order was claimed, the order itself is inherent, because a transmitting or receiving end cannot be eligible to enter a low power mode unless it is already capable of entering a low power mode.

In the remarks, applicants argued in substance that Edem does not teach or suggest that components capable of selectively entering a low power operating mode. But Edem teaches that components within the communication system, such as the various endpoints, are capable of selectively entering a low power mode when eligibility criteria are met [col. 8, line 67, and col. 9, lines 1-6]. Edem also teaches that within each endpoint are components that operate for full power communication [80' and 202'] as well as components that operate for low power communication [236 and 252]. Thus, Edem specifically teaches components that are capable of selectively entering a low power mode, substantially as claimed.

In the remarks, applicants argued in substance that Edem does not teach or suggest that selectively detecting and controlling portions of a physical layer device in said system. But Edem teaches selectively detecting if components in the system should enter a low power mode [col. 11, lines 40-47]. Furthermore, Edem teaches controlling portions of a physical layer device in said system [col. 10, lines 19-43, and col. 11, lines 19-39]. Thus, Edem specifically teaches selectively detecting and controlling portions of a physical layer device in said system, substantially as claimed.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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In this case, Edem teaches a method of conserving power by using an auto-negotiation feature to determine the capability and eligibility of components to enter a low power mode. Hobson teaches that components may be selectively placed into a low power mode [col. 11, lines 59-63, and col. 12, lines 35-47]. Thus, Hobson teaches a means for conserving power similar to that of Edem, including determining if components are eligible to enter a low power mode [col. 2, lines 66-67, and col. 3, lines 1-12]. It would therefore have been obvious to one of ordinary skill in the art to combine the teachings of the cited references because they are analogous art both directed to the problem of conserving power consumption.

In the remarks, applicants argued in substance that Hobson does not teach or suggest devices in a communication system, but rather systems having peripheral devices. But Hobson teaches the eligibility of the system to enter the low power mode is stored in a sleep register when a sleep request occurs [col. 10, lines 41-64], by using at least one binary bits [col. 9, lines 18-30], wherein the sleep register is organizationally unique [col. 10, lines 61-64]. Because computer systems use peripheral devices to communicate on a communication system, the teachings of Hobson are therefore also applicable to devices in a communication system, substantially as claimed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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